

United States Department of Agriculture
Animal and Plant Health Inspection Service
Center for Veterinary Biologics
P. O. Box 844
Ames, IA 50010

1. **Reagent Name:** *Clostridium botulinum* Type C Antitoxin
2. **Strain or Source:** Not applicable
3. **Lot Number:** IRP 428
4. **Fill Date:** April 10, 1995
5. **Expiration Date:** No expiration date has been assigned to this product because *C. botulinum* type C antitoxin has demonstrated over time to be very stable if properly stored.

Precautions: There are no known hazards associated with the use of this reagent.

6. **Intended Use:** To serve as the standard antitoxin when conducting *C. botulinum* type C toxin neutralization tests in mice.
7. **Instructions for Use:** *Clostridium botulinum* type C antitoxin IRP 428 contains 48 antitoxin units per mL (AU/mL). Dilutions of 1:1200, 1:2400, 1:4800, and 1:9600 contain 0.04 AU/mL, 0.02 AU/mL, 0.01 AU/mL, and 0.005 AU/mL, respectively. One and five-tenths mL of each dilution mixed with 1.5 mL of *C. botulinum* type C toxin IRP 421 diluted 1:40,000 provides results in which one group of mice all live and one group of mice all die when mice are injected intraperitoneally with 0.5 mL of the mixture.
8. **Test of Reagent:**

Determination of antitoxin titer – The antitoxin titer was determined by injecting mice in the intraperitoneal cavity with 0.5 mL of diluted antitoxin mixed with a known amount of *C. botulinum* type C toxin. The antitoxin titer was confirmed by comparing the results of mice injected with toxin-antitoxin mixtures containing IRP 428 with toxin-antitoxin mixtures containing *C. botulinum* type C International antitoxin.

Sterility test – Four vials of IRP 428 were tested for sterility by inoculating the antitoxin in tubes of sterile fluid thioglycollate medium and soybean-casein digest medium. No detectable growth appeared in any tubes of medium.
9. **Container Size, Type, Weight, or Volume:** Two-mL glass vials with 1.2 mL of antitoxin.

10. Storage Conditions: Store at -20°C or lower. Antitoxin that has been thawed should be stored at 2°- 7°C. Repeated freezing and thawing is not recommended.

11. CVB Technical Contact: Bacteriology Section, Center for Veterinary Biologics, (515) 337-6100.

12. Origin and Passage History: The serum was obtained from young adult goats immunized with antigen prepared from *C. botulinum* type C culture 203A (African strain).

13. Method of Preparation: The antitoxin was produced by vaccinating goats with *C. botulinum* type C toxoid, followed by a series of injections with *C. botulinum* type C toxin. Serum obtained from the goats was precipitated with ammonium sulfate and the dissolved precipitate dialyzed against 0.01 M PBS. The dialyzed material was passed through a sterile Millipore filter unit with a 0.22-µm membrane. No preservatives were added to the antitoxin.

14. Other: None

Reagent orders and feedback should be sent *including phone number* to the following email address: VS.DB.CVB.Reagent.Requests@usda.gov

Reagent orders forms (APHIS Form 2018) can be found on the CVB website.